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Some Aspects of Appendicitis*

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President and Brothers of the profession,

I am very pleased to meet you this evening and talk on certain aspects of appendicitis I have chosen the words 'Some aspects' with a purpose It helps me to talk at random, no matter what the omissions are If I should lead you through the bygone tracks of aeteology, pathology, signs, symptoms and the like, I should be boring to some and soporific to the rest Myself having gone through the mill of grinding and suffered the consequences thereof, I shall not inflict the same on you Now let us sit and chat what we like best

Appendicitis is a world-old disease, and as well, a world wide one Signs and symptoms almost resembling appendicitis have been described by Susrutha, the Ancient Indian Surgeon and it seems he has also stated that nothing short of knife could cure such cases No doubt, he was one of the best of his days, though insignificant when compared with modern times; and as such his name deserves to go down into the history of our country, especially in the field of Medicine

This disease is known in every country and clime, in greater or smaller numbers Statistics of this place show a growth in the incidence of it. Efficiency in diagnosis seems to be the main explanation for it, coupled with the rapidly diminishing fear for the knife on the part of the public Perhaps, change in the habits and diet may contribute a bit A certain author in England has decided that appendicitis is a disease of the civilized nations, and is rare among Negroes and animals; the same has been said about cancer of the stomach It is most unfortunate that Civilization should lead to such nasty ailments. It is no doubt commoner among the white races and the soldiers This speaks for their diet and habits in life and for the quality and extent of their civilisation

Appendicitis is commonest among boys between ten and twenty, is quite frequent below thirty, rapidly slows down in its incidence between 30 and 40 and becomes rare after forty This is probably due to the fact that appendix contains a lot of lymphoid tissue which is very prone to bacterial invasion as the tonsils and for this reason, appendix has been called by some surgeons 'the Abdominal Tonsil,' As age advances, this lymphoid tissue disap-

* A Lecture delivered under the auspices of the South Indian Medical Union.

pears and therefore, the lower incidence of appendicitis with advancing age. According to statistics from other countries, it is 3 times commoner in males than females, but I should say, that it is much less common in females, in our country. No obvious explanation has yet forthcome regarding this sex difference; but in general most diseases are commoner in men, apart from those that are peculiar and confined to the female sex.

Very little is known regarding the causation of appendicitis Foreign bodies, pins, threadworms and the like have often been incriminated; really they are accidents or incidents in the pathological appendix Germs like B. Coli and Streptococci have been victimised from time to time But the general feeling today is that they simply multiply in the appendix which is already the seat of some pathological change Obstruction seems to play a vital part, insufficient emptying of the appendix, due to concretions, strictures or spasm of the valve of Gerlach produce stasis in the lumen, which probably damages the mucus membrane, allowing the bacteria to pass through, causing widespread inflammation of this tiny organ. This inflammatory oedema completes the obstruction If the inflammation subsides and the oedema disappears, appendix begins to empty and resumes its function, leaving behind a mild catarrhal inflammation of the mucous membrane On the other hand, the bacteria pass through the damaged coats of the appendix and infect the peritoneal cavity, causing a localised abscess or general peritonitis The tip of the appendix is often without a mesentery and a branch of the appendicular artery passes subserously to the tip. Inflammation of this region causes thrombosis of this part of the artery and therefore, gangrene of the tip Acute and severe infection by itself is a cause of gangrene. Congenital twists and maldevelopment of the mesentery have been known to cause obstructive type of appendicitis. Trauma to the region of the appendix has been known to cause it. Inflamed appendix in a hernial sac is not unknown

From the pathological point of view, appendicitis may be classified as inflammatory and obstructive. In the early stages, they produce entirely distinctive symptoms Mild pain with slight rise of temperature, vomiting, coating of the tongue, and leucocytosis, ending in resolution or lump, constitutes the former; while intense colicky pain with vomiting of a sudden nature ending in perforation or gangrene is characteristic of the latter This one is most dangerous and less obvious and an early diagnosis is essential.

Acute catarrhal appendicitis may be primarily acute, having had no abdominal pain before; or may be an acute attack supervening on a chronic appendicitis. Chronic appendicitis may be primarily chronic, having had no symptoms of acute appendicitis before In this type, the patient never complains of abdominal pain, as a rule, but comes with symptoms of dyspepsia, such as distension, flatulence, nausea and vomiting On the other hand, repeatedlattacks of appendicitis result in a chronic inflammatory condition of the appendix with adhesions, kinks, strictures, concretions, mucocele and the like The term recurrent appendicitis is applied to repeated attacks of acute appendicitis, coming on at sufficiently long intervals; while Relapsing appendicitis means an attack during the convalascence of a previous one These

are all names which more or less suggest the nature of the pathological condition behind the symptoms

Usually a young man between 10 and 20, complaining of severe pain in the epigastrium with or without indiscretion in diet, with nausea or vomiting, pulse and temperature normal, tongue clean and probably constipated, presents the first early group of symptoms in early appendicitis, when it is difficult to be distinguished from an ordinary intestinal colic This stage usually lasts from 4 to 6 hrs Later epigastric and diffuse abdominal pain settles down to the right iliac fossa Appendix is tender on palpation, tongue may be coated, pulse and temperature slightly above or normal and vomiting may or may not be present There is little leucocytosis This constitutes the second group of symptoms when the surgeon has already suspected appendicitis In mild cases, the catarrh of the mucous membrane subsides and the patient recovers in a couple of days Many such cases do not come under the surgeon at all It is treated as some sort of colic by the practitioner, quite successfully for all practical purposes

If the inflammation doesnot subside, it spreads on to the outer coat of the appendix Lumph exudes. The omentum, the peritoneum and the intestines come together to lock up the infected fluid and a lump, is produced in the right iliac fossa During this third stage, the acute colicky pains become rarer and rarer, the temperature rises to 101° or thereabouts; marked leucocytosis, other signs of toxaemia and a soft tender lump in the right iliac fossa Where the peritoneum has a weak resistance, the infection spreads on to the general peritoneal cavity, resulting in a fall of temperature with a rising pulse rate, abdominal rigidity, distension and vomiting and this constitutes the 4th group of symptoms. On the other hand the lump described in the 3rd group gradually becomes larger, with increasing temperature and rigor and a high leucocyte count This is the formation of an abscess It is some times very difficult to distinguish between an abscess and the inflamatory lump; in either case, waiting is the treatment of choice The lumpy type resolves sooner or later while the abscess increases in size till it bursts inside or outside. Some small abscesses may yet be absorbed In rare cases, the abscess may burst, the appendix may slough off and a faecal fistula may result

There are certain atypical cases calling for comparatively good skill in diagnosis. Pain, tenderness and lump in the right iliac fossa with fever occurs frequently, in cases of Filarial adenitis, especially in tropics; marked leucocytosis is present All the signs and symptoms of appendicitis are there But in Filarial adenitis temperature comes on earlier than the pain and is usually higher than in appendicitis. In case of doubt, always operate

Acute pyelitis and pyelonephritis can be easily mistaken for retrocaecal appendicitis; when confined to the right side The temperature and signs of toxaemia are greater in this type due to infection of cellular tissues in the loin; but examination of urine shows pus cells, bacteria and albumen in pyelitis. It is a more frequently missed condition than usually imagined

Ureteral calculus, though rare, is yet another pitfall, The classical symptoms of pain running to the thighs and scrotum is obtained only when the

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Extracts from the Presidential Address to the National Institute of Sciences of India Benares, 1941

By

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Organization of Public Health and Medical Services in India

Introduction

The Indian Empire, excluding Burma and Ceylon, extends from Persia and Afghanistan on the west to the borders of China on the east, and from about latitude 40° in the north to almost the equator in the south. This vast area, which presents a land of very varied contrasts in almost all respects, such as its physiography, climate, flora, fauna, anthropology, history, etc., came under the influence of European civilization at a relatively late date, but very material advances in almost all directions have resulted from this contact. Even in regard to this influence, however, the contrasts presented in different parts of the country bring out very vividly the vast nature of the extremely varied problems which had and have to be faced in the length and breadth of this great sub continent.

Confining my remarks, as I propose to do in this communication, to the Public Health and Medical Services in this country, it is apparent that side by side with the most modern, up-to-date and efficient machinery which has been evolved and established in a number of centres throughout the length and breadth of the country, the state of affairs in many of the areas is almost as primitive as it was during the Moghul times or even earlier.

During the early times there was a relatively highly evolved system of curative medicine in vogue throughout India. This was particularly well developed during the heyday of Buddhism in the country, but the highly important preventive side was, as in almost all other countries during this period, non-existent. Contact with the West marked a material change, and one of the outstanding points of this change was that with the exception of a relatively small number of private practitioners of the indigenous systems of medicine, the State assumed almost the entire responsibility for providing medical relief to the country. Hospitals, dispensaries and other adjuncts, together with the necessary personnel, were provided on a fairly liberal scale, but these were far from sufficient for the teeming millions of this great land. Further, in essentials all this provision concerned itself for a long time with the curative rather than the preventive side of medical relief. Within recent years in a few of the larger towns some public-spirited people or communities have provided additional institutions of curative medicine, while the numbers of private practitioners have also materially increased. All the same, the present position is far from satisfactory, and in view of the impending constitutional changes it is proposed in this communication to take stock of the situation and

suggest what should be done for improving the existing conditions.

Landmarks in Public Health Administration in India.

In a review of the Public Health Administration in India at least three landmarks in the history of its development have to be considered :—

I. The appointment of a Royal Commission to enquire into the health of the army in India in 1859

II The report of the Plague Commission in 1904 following the outbreak of plaque in 1896.

III. The Reforms introduced by the Government of India Act of 1919.

Royal Commission of 1859. The Royal Commission of 1859 was appointed to enquire into the extremely unsatisfactory connitions of the health of the Army in the country Between 1859 and 1863 the mortality rate among European troops was 69 per 1,000, while among European women in 'married quarters' it varied from 44 to 276 per 1,000 The Royal Commission recommended measures not only for the army but also for the civilian population. In accordance with its suggestions 'Commissions of Public Health' were established in Madras, Bombay and Bengal in 1864 The Commissions in Madras and Bengal, though they advocated far-reaching measures including the employment of trained public health staffs in the districts, did not lay down any definite policy In the words of a former Sanitary Commissioner with the Government of India, 'Government had to deal with a population which was unwilling and unready to receive sanitation, which either frankly disbelieved in its efficacy and resented any change in established customs or was too ignorant and apathetic to understand the goal at which it aimed Sanitary measures were received not only by indifference but by active opposition.' Under the circumstances, very little advance was possible, but the outbreak of plague in 1896 raised issues of fundamental importance which can best be summed up in the words of the Sanitary Commissioner at that time :—

'When plague appeared it was not a new disease, but it was new to the present generation in Indians and it has exacted a very heavy toll of deaths all over the country The strangeness of the disease, the unpopularity of the measures taken to control it and the importance of these measures have served to rouse fhe people from their apathy and concentrate the attention of all, but especially of the educated classes, on sanitation, in a way that nothing else could have done.

'At the same time plague has not been without its effect on Government. Previous to the advent of this disease it had been the generally accepted opinion that sanitation was the work of any medical officer and required no special training. A special sanitary staff had, therefore, not been considered of any very great importance When plague appeared the staff was inadequate and unprepared; action was taken on general principles and sanitary measures were adopted, which with further study of the aetiology, we now know were unsuitable and could do little to check the spread of the disease. The waste of life, time, money and

effort that resulted has impressed on Government the necessity of being prepared in future and large changes have been effected with that object.'

Plague Commission

The report of the Plague Commission in 1904 advocated the reconstruction of the Sanitary Department on a wide imperial basis, with the provision of adequate laboratory accommodation for research, teaching and the production of sera and vaccines. The Indian Research Fund Association was formed in 1911 and a forward sanitary policy, with a devolution of powers to the local governments, was formulated in a resolution of the Government of India in 1914.

Reforms of 1919.

The Montague-Chelmsford Reforms of 1919 had a very marked effect on Public Health Administration, this was partly beneficial and in other respects detrimental Provincial ministers responsible to the legislature were anxious to hasten the growth of education, medical relief and sanitation so far as funds permitted. The organization of trained Public Health staffs for urban and rural areas, which the 'Commissions of Public Health' had recommended in the sixties of the last century, was at last taken up in earnest and in the years succeeding the introduction of the Reforms, the organization of health services became a marked feature in most Provinces Since 1921 there has indeed been far greater public health activity in the Provinces than ever before.

Civil Medical Services.

All Civil Medical Services in Presidencies and Provinces were formerly under the control of a single administrative officer known as the Surgeon-General in the former and the Inspector-General of Civil Hospitals in the latter. Unfortunately, owing to an insistent demand for medical relief, which is what appeals most to the individual in a community with a relatively low standard of living, the available funds were expended in the main on increasing and improving hospitals and dispensaries, and the obvious need for more and yet more of these, associated with a chronic shortage of funds led to the neglect of preventive measures and particulary of those fundamental but costly ones comprised in the term 'Environmental Hygiene' Relief of sickness and suffering was readily understood and appreciated by the public, while the application of sanitary measures, implying as it did interference in age-long habits, with restrictions which were regarded as irksome and trespassing upon vested interests or religious customs, was opposed on all hands by the people who are as conservative as any in the world *En passant* it may be noted that the position in India at this time was generally very similar to that in England some hundred years ago.

Separation of Preventive and Curative Departments

Preventive and curative services separated.

Early in the present century the Secretary of State for India caused the separation of preventive from curative medicine by creating in each Presidency and Province a separate 'department' for preventive medicine, with an independent budget, and under an officer designated as the 'Sanitary Commissioner'; the name of the officer was changed in 1922 to the less appropriate one of 'Director of Public Health,' and

his department was also designated as the 'Public Health Department.' In many Provinces the division of duties as between the heads of the departments of curative and preventive medicine was not fully specified, and only a broad distinction of curative and preventive medicine was regarded as sufficient The formation of separate departments for preventive medicine in the various Provinces provided a great impetus for this branch of medical work, and far-reaching, much needed reforms were planned. These in many cases were well advanced when the Great War (1914-18) called a halt for the time being After the war the young Public Health Departments again got busy They found themselves faced with the immense problem of Environmental Hygiene in a land where, even in towns, safe water supply and sanitary systems of sewage and rubbish disposal were, as a rule, conspicuous by their absence, the housing of the poorer classes was atrocious, and local administration, except in a few outstanding cases, was overshadowed by vested interests and correspondingly inefficient In the rural areas sanitation simply did not exist, soil pollution was general, flies swarmed, malaria and hookworm infection were almost universal, leprosy and tuberculosis were widespread, and small-pox, cholera, and plague regularly took their periodic tolls uncontrolled by any environmental checks or preventive measures The provision of properly qualified and trained staff for this work presented a serious difficulty The Medical Department had its system of hospitals and dispensaries manned by Civil Surgeons, Assistant Surgeons, and Sub-Assistant Surgeons In some Provinces the Civil Surgeons, originally ex-officio District Medical and Sanitary Officers, retained the dual charge, while the Public Health Department was building up a subordinate personnel of Sanitary Inspectors, epidemic Sub Assistant Surgeons or Health Assistants to Civil Surgeons and later Health Visitors All these worked under the Director of Public Health who had one or more Assistant Directors and other specialists, leaving the provision of the more costly full-time District Health Officers until the subordinate personnel had been trained and appointed Other Provinces hastily appointed expensive District Sanitary Officers, whom in some cases they called Medical Officers of Health, although, owing to the fact that every district already had a District Medical Officer or the 'Civil Surgeon' as he is usually called throughout India, their duties were not comparable with those of Medical Officers of Health in England Further, in the absence of a separate staff of subordinates the work of these new officers was limited to advising only As an exception, however, the Presidency of Madras succeeded in creating a complete staff of Health Officers, Assistant Officers and Sanitary Inspectors

Lack of co-operation between Medical and Public Health Departments

Lack of co-operation.

The question at the present time is the lack of co-operation and consequently of co-ordination obtaining in many parts of India between the official Medical and Public Health Departments. This is a problem peculiar to India, for it does not exist in Western countries nor in the Dominions and Colonies where the separation of the official Health Services into 'curative' and 'preventive' sections has never been effected To some extent this is due to the unsuitable titles given to the respective Depart-

ments and still more to their administrative heads In the Presidencies the head of the Medical Department, as has been remarked already, is known as the 'Surgeon-General': a passable appellation with an historical basis as it is applied to the Chief of the United States Public Health Service. In the Provinces, on the other hand, the head of the Medical Services is known as the 'Inspector General of Civil Hospitals' an inadequate and misleading designation for one who is the adviser to Government on all matters connected with medical relief, administrator of all public medical institutions, head of the medical services in the Province, President of Provincial Medical Council of Registration and Medical Education and President or Chairman of a host of other medical organizations and committees The designation 'Director of Public Health' is equally inappropriate, since it implies extensive powers and a range of activities much wider than are possible under existing conditions The two titles together are largely responsible for the confusion of functions pertaining to the two Departments and the consequent overlapping, duplication and wastage of their resources Another factor contributing to this confusion has been the absence of orders laying down the exact policy and scope of work for each Department

It has been asserted that the maintenance of separate departments for medical relief and preventive medicine is an advance upon the English System. Its advocates point out that it enables experts on each side to administer their own subjects While the specialists in preventive medicine argue that those who have not taken a diploma in Public Health cannot appreciate the requirements and scope of their work, they seem to lose sight of the fact that Public Health personnel is so fully occupied with Environmental Hygiene that it loses all touch with clinical work and is, therefore, not the proper agency for the administration of medical relief. There is much to be said on both sides Even in England similar views have been expressed by recognized leaders of the profession But in actual practice the maintenance of two separate public medical services has not led to satisfactory results in India So long as the Public Health Department limited its activities to Environmental Hygiene there was little or no difficulty This subject offers so vast a field that it could well keep a large department fully occupied for many decades to come As soon, however, as the separate Public Health Department proceeded to interest itself in individuals rather than communities, overlapping began to appear; this has been most marked in the fields of maternity and child welfare, leprosy and tuberculosis, and even rural medical relief In regard to midwifery a tendency appears to be developing which, if it is not checked may lead to a conflict between the practising doctors and health visitors and midwives Already with the peculiar social conditions prevailing in this country medical colleges and schools are finding it increasingly difficult to obtain the requisite number of 'cases' for training The position in regard to such diseases as leprosy and tuberculosis is anomalous In one Province the Inspector-General of Civil Hospitals is responsible for leprosy work, in another the Director of Public Health The same is the case with tuberculosis

There is sufficient evidence, where it occurs, of a lack of co-operation between the two official departments and

of the development of 'exclusion' instead of an *esprit de corps* which can only be destructive in its effects The situation requires to be met by a close *liason* between the two branches, such as, for example, obtains in the Government of India, where the Director-General, Indian Medical Service, has the Public Health Commissioner working with him in his office as his principal staff colleague Such an arrangement not only conduces to a close co-operation, but the distribution of work is facilitated The urgent necessity for a friendly collaboration between the two departments, if the system is not to break down, is essential, and is recognized by experienced administrative officers of both departments The Central Advisory Board of Health, established in 1937, should prove a valuable agency in this direction. At its meeting in Madras in January, 1939, it passed the following resolution for the establishment of similar Provincial Boards of Health:

'The Board stresses the desirability of establishing in each Province and State an Advisory Board of Health with the Minister-in-charge as Chairman.'

While in reference to Maternity and Child Welfare it adopted the following resolution:

'Co-ordination between the medical and public health departments is perhaps more vital in the field of Maternity and Child Welfare than in any other of medical and public health work'

If a policy of close friendly collaboration obtains between the two departments in the Provinces and the relative spheres of each are defined, the existing system will continue to function tolerably well, but if friendly co-operation that should be sought and loyally observed by the workers in both the departments is replaced by a spirit of exclusion, and co-operation is stigmatized as a 'dual control', then a position in which the two departments are in opposition will arise sooner or later and the profession will be divided into two camps Such a state of affairs will hardly be in the interest of either of the two departments, while the effects of such a controversy are bound to lead to a great deal of suffering for the poor public.

Federal Ministry of Health.

The best solution of the problem appears to be the establishment of Ministries of Health in various Provinces modelled on the English System with suitable modifications in regard to the local conditions.

Public Health Service in Great Britain.

The modern Public Health Service in England is barely a quarter of a century old and, like so many of the English institutions it arose more by accident than by design The dissolution of the monasteries left the destitute without any visible means of support until the year 1601, when the Elizabethan Poor Law established Parish Overseers and Workhouses—this system remained practically unchanged for over two centuries Besides relieving destitution, these authorities carried out any measures that were necessary for the public health, such as the control of epidemics, the provision of sewers, or the abatement of sanitary nuisances. In 1834 the Poor Law Amendment Act was passed after a great deal of agitation and following the report of the Poor Law Commission of 1832 District Medical Officers were appointed to attend to the sick poor, while the

infirmaries were built to accomodate paupers who were too ill to be kept in the Workhouses.

Despite all these changes, the state of the public health was never taken very seriously until the cholera epidemics between 1830 and 1854 galvanized the Government into action. Edwin Chadwick, one of the Poor Law Commissioners, in his *Survey into Sanitary Condition of the Labouring Classes of Great Britain,* exposed not only the *insanitary evils of the towns and villages,* the hideous legacy of the Industrial Revolution, but, by showing how closely disease was related to poverty, provided a convincing argument in favour of far-reaching reforms. His 'sanitary idea' led to the appointment in 1848 of the General Board of Health, which, after a stormy life, was superseded by the Local Government Board of 1871 In 1872 the country was divided into urban and sanitary districts, and medical officers of health and inspectors of nuisances were appointed for the first time Credit is due to the *authorities of the* Liverpool Borough for having had the vision to appoint a Medical Officer of Health much earlier Then followed the great Public Health Act of 1875 which is the bulwark of all sanitary laws

From 1888 onwards there has been an ever widening stream of health legislation Statute after statute has swollen the ranks of the Public Health Service to such an extent that to-day there is scarcely any field of human activity in which the health officer does not play an important part Another important landmark, the National Health Insurance Act of 1911, provided the adult manual worker with compulsory insurance against loss of health. The Bill was hotly contested during its passage through Parliament, but it was successfully piloted and passed into law throgh the efforts of Mr Lloyd George

Finally, the creation of a Ministry of Health in 1919 with wide powers in place of the Local Government Board was the crowning recognition of the importance of health in the nation's life. This wise step was made inevitable by the Great War of 1914-18.

Ministry of Health: The Ministry of Health is the chief tribunal for Local Authorities Broadly, it engages in the following activities :—

(1) Public Health.

(2) Local Government and Local Finance

(3) Housing and Town Planning.

(4) Poor Law Administration.

(5) *National Health Insurance.*

Its Medical Deportment, under the Chief Medical Officer, is divided up into the following sections :—

(1) Medical Intelligence, Infectious Diseases, Institutional Health, etc.

(2) Maternity and Child Welfare.

(3) Tuberculosis, Venereal Disease and Institutional Therapy

(4) Nutrition, Food and Drugs Administration, London Hospitals, Water Supplies, etc

(5) General Practitioner Services and Insurance

(6) Surveys, Hospitals, Environmental Hygiene, and Public Assistance

(6) Medical Services, Emergency Hospital

(8) Welsh Board of Health.

Each of these Divisions is in charge of a Senior Medical Officer who is responsible to the chief Medical Officer for the work carried on in his division. Furthermore, Regional Medical Officers are employed to supervise the work of the panel doctors and the pharmaceutical chemists under the National Health Insurance Scheme, while other officers are detailed to investigate serious epidemics of infectious diseases, outbreaks of food-poisoning, or make surveys of Local Government areas

Proposed Federal Ministry of Health of the Government of India

Federal Health Ministry for India.

In India a Federal Ministry of Health should be established at the centre to provide the necessary co-operation agency for the provincial local self-government departments, which are at present responsible for the supervision of local and for public health administration in the provinces. This Ministry would also be responsible for the other health functions statutorily conferred on the Central Government by the Government of India Act of 1935. All problems in connection with curative and preventive medicine should be dealt with by one department divided into appropriate sections The following sections are tentatively suggested for consideration:—

1 Prison medical service
2. Port sanitation and quarantine service
3. School medical service.
4. Public Health including —
   - *(a)* Medical intelligence, infectious diseases and international health.
   - *(b)* Nutrition, Food and Drugs administration including biological products
   - *(c)* Environmental Hygiene including housing, water supply, drainage, waste products
   - *(d)* Industrial hygiene.
5. Medical relief including :—
   - *(a)* Maternity and Child Welfare, venereal diseases, tuberculosis, leprosy
   - *(b)* General practitioner services with special reference to rural dispensaries.
   - *(c)* Hospitals.
   - *(d)* Drug addiction
   - *(e)* Health Insurance
6. Lunacy
7 Scientific Research.

For these purposes, the Ministry should have a highly trained staff of expert advisers The Director-General, Indian Medical Service, who as the Surgeon-General with the Government of India most nearly corresponds to the Chief Medical Officer of the Ministry of Health in England, has at present an insignificant number of specialists on his staff In England though public health administration is established on well-regulated lines, the Chief Medical Officer controls a strong team of workers in each special subject of medical health work. such as maternity and welfare, tuberculosis, industrial hygiene and so on. In India, on the other hand, while the conditions are much more complex, and although the necessity for an expansion of the Central Government's technical staff has been repeatedly stressed by the Directors-General and Public Health

Commissioners, the task is left to only two or three officers.

Public Health Organization in the Provinces.

Provincial Health Organization. *Each province should have a Chief* Medical Officer responsible to the Minister of Health of the province for the administration of the Medical subject with a number of deputies in charge of the various departments, e.g., prisons, schools, medical and public health problems. The deputies should be given a chance to work in different departments so that the Chief Medical Officer of the future would have men available with first-hand experience of individual and Environmental Hygiene, while Regional *Medical Officers should be appointed* to look after various areas or zones.

A Provincial Board of Health under the Chairmanship of the Minister of Health should be constituted in each province. The members should be drawn from the Medical and Public Health specialists and suitable persons should be co-opted for different problems. The help of the Revenue, Education and Public Works Departments would be needed to shape the health policy of the Provinces. Suitable persons may be constituted into *ad hoc* committees to tackle important problems of general and local interest, while the co-operation and advice of the specialists on the staff of the Federal Ministry of Health should be available to the Provincial Governments in connection with problems of an all-India nature.

In the districts, District Health Committees should be formed for the same purpose. These should be presided over by the Collector of the district or the President of the District Board; the co-operation of both agencies is essential, and this alone will make it possible for these committees to work efficiently.

So far as the rural population is concerned, medical men engaged in curative work should be able to undertake public health duties as well. Their education and training should be of such a nature as to enable them to do so without difficulty. The doctors engaged in combating epidemic diseases should be expected to undertake public health work when not dealing with outbreaks of infectious diseases. The rural doctor, who is the final link between the Health Services in the country and the people, should also be responsible for giving an elementary health education to the patients in connection with their immediate surroundings. Such instruction would be much more effective than general lectures and demonstrations to large audiences.

Conclusions

To sum up the views expressed above, I consider that, under the conditions prevailing in India at present, the State is essentially responsible for providing the necessary agencies for both preventive and curative medicine. Curative medicine forms an integral part of the public health services of a country inasmuch as very often the sick man is the source of infection and no constructive medicine is possible unless the population is rendered free from disease by treating the individuals. Again, according to the newer conceptions of a State, it is necessary that disablement whether temporary or permanent should through intensive use of curative medicine be cut down to the barest minimum. Moreover, it is

through curative medicine alone that it is possible to win the confidence of the public in a country like India and bring home to the people the advantages accruing both from preventive and constructive medicine

Starting from the bottom, I consider that to meet the requirements of public health of the population there should be a combined establishment which should form the basis of preventive, curative, and constructive medicine in each village This should be linked up with a more organized central agency discharging these combined duties and catering for a convenient sized population, the bulk of which will depend upon various factors such as communications, incidence of disease, etc. These primary organized centres will have to be supervised and assisted by a district centre in which there should be a specialized staff for the main medical subjects These district centres in turn should be in touch with a larger provincial organization in which the staff consisting of specialists in various branches of medical science should work under a senior and experienced medical man. This latter should constitute the administrative head of the medical service in the province under the Provincial Ministry of Public Health. He should have a thorough training in the methods of public health administration, community health organization, constructive medicine, etc The staff of the provincial organization should further be large enough to be utilized for medical and public health training both for under-graduate and post-graduate work

The activities of the health organization in different provinces should be co-ordinated by a more elaborate and efficient Federal or an All-India organization working under the Federal Ministry of Health The administrative head should be an officer with wide experience of preventive, curative and constructive medicine, and have on his staff expert advisers in as many of the important branches of medicine as possible With the advice and help of these advisers, it should be his duty to deal with and co-ordinate the problems of public health which concern the country as a whole Curative and preventive medicine must work as one single whole ; to let them work separately in water-tight compartments is sure to lead to confusion, while only an organization of the nature detailed above will be able to deal successfully with the multifarious problems of public health in this vast country

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MANAGER

(*Continued from page 147*)

stone is lodged in the lower part of the ureter. Colicky pain in the right iliac fossa and loin with tenderness on the point of stone is all that can be obtained Previous history of stone and the examination of urine for gravel may help the diagnosis. It is unusual to think of X-ray in such cases So the appendix is removed and he has another colic and the stone is passed, during convalascence, when the mistake in the diagnosis is found out Of course, the removed appendix will show no changes

Rupture of a blood cyst of the right ovary in a young girl is difficult to make out from a catarrhal attack of pelvic appendicitis The colicky nature of the pain may be absent and may give a history of irregularity in menstruation Tenderness is present lower down and may be palpated from the right vaginal fornix in both cases. It is better to operate in such cases than to wait, for a diagnosis. Acute salpingitis on the right side presents similar symptoms Also rupture of an ectopic gestation gives rise to sudden lower abdominal pain, rigidity, tenderness and vomiting History of amenorrhoea, suddenness of the onset, and signs of haemorrhage, e.g., increasing pallor, rapid thready pulse, sighing respiration with no rise in temperature should put tha surgeon on the track

I had a few days ago an interesting case of a lady of 40 years complaining of pain in the right iliac fossa for 4 days with a tender palpable lump, temperature 101° and W.B C 13,000 This lump was comparatively freely movable and not felt from the vagina Operation showed it to be a case of twisted ovarian cyst, angry-looking and gangrenous in places. A pre-operative diagnosis in such cases is almost impossible

A leaking perforation of the duodenum may produce a tender lump in the right iliac fossa with pain and temperature giving no signs indicating to a duodenal condition. Rigidity may be present on the whole of the right side. History alone can help in such cases.

Acute cholecystitis with rigidity and tendernes in the right side in the later stages, may for the same reasons be mistaken for inflammation of a high placed appendix.

Appendicitis may be classified also in a domestic manner in three ways e.g the nuisance type, the angry type and the violent type The nuisance type is one where the patient feels a sort of mild, gnawing pain, flatulence, distension and other symptoms which makes his life very inconvenient though nothing very serious and fatal This feature of a chronic appendix may well be compared to an unfortunate husband having a nagging wife making life miserable The angry type is the usual one which may prove dangerous, if not attended to in time The violent type is the gangrenous type which spreads on to the peritoneal cavity long before help could be given. Some husbands have such uncontrollable wives

Chronic appendicitis in this country is a rather frequent condition and is often said to be caused by a variety of attenuated streptococcus as could be isolated from infected teeth, chronic cholecystitis and the like. Professor Wilkie claimed to have produced such chronic inflammations in certain viscera in animals by injecting this variety of streptococcus

The symptoms of chronic appendicitis are mainly referred to the region of the pylorus and the duodenum There is possibly a close lymphatic vascular nervous connection between the two regions It has been experimentally proved by direct vision in living patients that ileocaecal value opens and closes simultaneously with the pyloric ring The flatulence, nausea, vomiting and the like in chronic appendicitis is due to pyloric spasm and in no way differs from the symptoms caused by chronic cholecystitis and other chronic conditions of the abdomen. Moynihan's Abdominal triad ——— peptic ulcer, chronic cholecystitis and chronic appendicitis all form a right sided group of symptoms which may easily be mistaken one for the other

The view that chronic appendicitis is a precursor of peptic ulcer is rapidly being given up In a series of examinations conducted in General Hospital under Col Bradfield with a view to determine the role of the appendix in peptic ulcers it was found histologically that in the majority of cases the appendix was normal

Appendicitis in children is considered as a serious condition and requires particular attention, for the peritoneal resistance is comparatively low in children, so that the waiting policy under all circumstances is condemned Appendicitis in pregnancy is a complicated affair Pyelitis being a frequent accompaniment of pregnancy may closely mimic appendicitis Early diagnosis is very difficult because of the physiological tumour. Uterine contractions in the later stages may cause right sided pain but can be distinguished from the pain of acute appendicitis, with a certain amount of care The operation is more difficult even if the diagnosis is confirmed. Mortality of appendicitis in pregnant women is about 50 per cent because of late diagnosis and difficulty of operation

Treatment.

The treatment of appendicitis is always operative Until recently, when and where to interfere has been a question of dispute. Nowadays the matter has been much clarified and the treatment can be summed up by saying 'Remove all the appendices in case of appendicitis, excepting those that present a tender lump in the right iliac fossa that is obviously resolving" A rise in temperoture with a falling pulse rate in a case of appendicitis is an indication that the infection is localised and probably becoming an appendicular abscess, while a falling temperature and a rising pulse rate is an alarming sign of invasion of the general peritoneal cavity If the lump is resolving we treat the patient on conservative lines, the Fowler's position, fluids by mouth, fomentations 4th hourly and the fourth hourly chart If an abscess is suspected again treat on conservative lines giving time for adhesions to form before draining it extraperitoneally

Mcburney's incision is the one of choice in cases of appendicitis when the diagnosis is certain except in the female sex and in cases of pelvic appendicitis

In case of women there is always a possibility of a mistaken diagnosis in case of inflammation of the pelvic viscera, hence a paramedian incision is advisable In pelvic appendix, McBurney's incision does not give enough exposure and again a paramedian incision is suitable In all

other cases McBurney's incision is simple and directly on the appendix and most of all, the approach does not interfere with the natural anti-infective barrier on the inner side of the appendix The disadvantages of a hernia usually spoken off is a remote one. In cases of mistaken diagnosis the surgeon has to close this opening and make a fresh paramedian incision Other incisions like Battle's or Lanz's need not be mentioned.

Journal of South Indian Medicine

NOTICE

CONTRIBUTIONS of medical interest—original articles, case notes, clinical memoranda—are invited. They should be addressed to the PUBLICITY OFFICER, JOURNAL OF SOUTH INDIAN MEDICINE. 56, Thambu Chetty Street, Madras and should be accompanied by a stamped addressed envolope if their return is desired in case of non-publication.

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Books and pamphlets for review should be sent to the Publicity Officer who will be pleased to receive also reprints of which abstracts will be of interest to the profession. Journals for exchange or review should be addressed to the Publicity Officer.

Abstracts and Notes

GENITAL TUBERCULOSIS.

E. A. Miller and M. J Lustok: *Rocky Mountain Medical Journal.* Jan. 1940.

Genital tuberculosis may occur at any age but the vast majority of patients range from 20 to 40 years. The younger the patient the more virulent the infection. Genital tuberculosis is secondary to some other tuberculous focus in the body, usually the lungs The infection reaches the genital tract directly by way of the blood stream, by way of the lymphatics and secondarily by continuity of tissue The seminal vesicles and prostate are the seat of the genital tuberculous infection (though the epididymis gives more pronounced symptoms) and also the focus from which the bladder and kidneys in many cases are affected The disease most frequently starts in the vesicles and prostate, but may occasionally start in the epididymis, and the mode of infection is primarilly haematogenous.

In the early stages of the disease, no change may be demonstrable by palpation, with the finger in the rectum, but in the vast majority of cases definite signs are present Irregular, firm but not stony hard nodules in the prostate recognised by means of touch indicate extensive involvement of this organ. When the seminal vesicles are felt as pencil like bands, extending in an upward and outward direction from the upper margin of the prostate, extensive involvement of these organs is diagnosed Examination of the external genitalia is best done with the patient standing facing the surgeon Observations are made of alterations, in the normal rugose appearance of the skin of the scrotum, the shape of the testicles and their relative position. Adhesion of the skin to the epididymis is a well known sign, as is also a sinus discharging creamy pus A comparison of the mobility of the two testicles is helpful sometimes; a normal organ can be moved freely within its covering, particularly upwards and downwards, this movement is often restricted when tuberculosis of the genital organs is present In the early stages a soft or even fluctuant mass at the site of the epididymis and involving it is present in most cases If untreated, it will result in ulceration and formation of a chronic sinus discharging pus, or it will become a hard fibrotic or calcified mass Late in the disease, the epididymis may lose its identity entirely or, if it could be palpated, will be craggy and nodular. The vas becomes thickened and has bead like prominences

The authors have classified these cases into catarrhal, ulcerative, and fibroid types.

The prognosis of genital tuberculosis does not depend entirely on the prognosis of the associated pulmonary lesion The presence of genital tuberculosis adds considerably to the gravity of the general disease and shortens the life expectancy.

The surgical treatment recommended varies from a careful resection of the infected focus to the complete removal of the seminal tract The immediate mortality of radical surgical management is not favourable

The beneficial effect of ultra-violet therapy in extra-pulmonary tuberculosis is well known. Irradiation of the

epididymis, the prostate and seminal vesicles gives rapid results The authors report encouraging results in the treatment of the catarrhal and ulcerative types.

SULPHATHIAZOLE—CLINICAL INVESTIGATIONS

Spink and Hansel (*J A M. A* 1940, 115, 840) have found that as compared with sulphapyridine, sulphathiazole is equally effective in pneumococcal pneumonia, more so in staphylococcal septicaemia, and in cases of infection of the urinary tract due to staphylococcus, bacillus proteus, alpha haemolytic streptococcus, and escheria coli Sulphathiazole is readily absorbed and quickly excreted in the urine; it causes less nausea and vomiting but more dermatitis than sulphapyridine.

Carrol and others (*J A M A* 1940 115, 1350) observe that sulphathiazole has proved clinically effective in a very positive manner against staphylococci, gonococci and pneumococci Recovery has resulted following its use in renal abscesses, carbuncles, furunculosis, osteomyelitis, septicaemia, ulcers of the penis, pyelonephritis, impetigo, and other infections

(Sulphathiazole is the newest derivative of sulphanilamide)

GONORRHOEA AND THE SULPHONAMIDES

E. E Prebbie: *Medical Press & Circular*. Sept, 4, 1940

The sulphonamides are in four groups :—

1. Prontosil, sulphonamide, sulphanilamide, streptocide.
2. Uleron, Diseptal.
3. M. & B 693 (Dagenan), sulphapyridine
4. Albucid.

Clinically all these drugs are very closely related, but their effects tend materially to differ

1 *Prontosil group*: This is the first group to be used in the modern chemotherapy of gonococcal infections, and used correctly the results are excellent. The best results are obtained if the drug is with-held until the infection is eight days old, as it is necessary to allow the body to develop an immunity to the invading organism before commencing chemotherapy. Treatment consists of giving 8 tablets in divided dosage—2 tablets four times a day—preferably crushed and given in milk, continued in this dosage for one week, and then giving 6 tablets daily for a second week At the end of this time treatment with this drug should be discontinued

2. *Uleron group*: This drug is a disulphonamide, and the results vary in the hands of different individuals The author thinks that this drug is very disappointing when compared with the others It is recommended to delay administration of the drug for eight days and then to give 6 tablets daily for 4 days, followed by an interval of ten days, the course to be repeated once or twice This drug is much less toxic than the other types but not nearly so effective.

3. *M. & B 693*: This drug is undoubtedly the most effective and appears to be almost a specific in all diplococcal infections Excellent results are obtained in all stages of the disease, and no preliminary period of

waiting is necessary or desirable. As a result, complications are now rarely seen in cases treated in the acute stage The dose given should be adequate; 8 tablets should be given daily for the first 2 days, followed by 6 tablets daily for a minimum of 6 further days, and a maximum of 12 days' treatment should not be exceeded

4. *Albucid*: This drug appears to be relatively non-toxic, but cannot compare with M & B 693 It has not been used in a sufficiently large number of cases to assess the results

Toxic reactions: These drugs should only be used under strict medical supervision The toxic reactions caused by them are headache, nausea and vomiting, vertigo, cyanosis, skin rashes, lassitude and agranulocytosis If the reactions are not too severe, the tablets should be continued until full therapeutic effect has been achieved If the reactions are severe, they must be stopped at once

Diet in sulphonamide therapy: The dietetic restrictions in gonorrhoea which were advocated in the pre sulphonamide era should still be adhered to. In addition, substances containing sulphur should be deleted from the diet of a patient suffering from any of the toxic reactions. Purgatives should be forbidden but liquid paraffin may be permitted.

Irrigations: If the patient is first seen before the disease is eight days old, irrigations should be given into the anterior and posterior urethra twice daily, and can be discontinued or done once daily after commencement of chemotherapy The author's practice is to reserve irrigations for those cases which appear some what slow in clearing up or which persist with pus threads in urine.

Tests of cure: should be thorough and consist of provocative injection of gonococcus vaccine, examination of discharge, and a urethroscopic examination.

Treatment in the female: The dosage in the female should be reduced by approximately 25 per cent Local treatment must be carried out in addition to the sulphonamides The vagina should be swabbed with a saturated solution of sodium bicarbonate, followed by swabbing with a mild antiseptic. After drying, 5 to 10 per cent argyrol in glycerine should be applied to the endocervix A gauze pack soaked in a 25 per cent solution of magnesium sulphate in glycerine should be inserted into the vagina and removed the next morning. This treatment should be done thrice weekly.

FISH OILS IN INDIA

Principal Information Officer, Govt, of India.

At a meeting of the Medical Stores Supply Committee held in New Delhi the Chairman Lt General G. G Jolly Director-General Indian Medical Service, revealed that a flourishing fish liver oil industry existed in the Madras Presidency 80 years ago. Apparently this flourishing concern was gradually killed by competition in prices

Medicinal liver oil from the shark and saw-fish is once more being produced in Calicut It is understood that efforts are also being made by the Governments of Bombay and Bengal and the State of Travancore to manufacture fish oils Modern research has shown that

the use of shark and saw-fish liver oils as a substitute for cod liver oil is sound practice, since the former are considerably richer in Vitamin A than cod liver oil. Yet long before vitamins were heard of, the medicinal value of shark and saw-fish liver oil was recognised in India where Vitamin A deficiency is wide spread.

A modern industry engaged in the production of medicinal fish liver oil enjoys the advantage that scientific methods for testing and standardising such oil are available Investigations about the vitamin content of oil in the Nutrition Research Laboratories, Coonoor and other laboratories have played an important part in recent developments. There is an enormous need in India for cheap medicinal products rich in Vitamin A and other vitamins

A "Report on the Sea Fish and Fisheries of India and Burma" by Surgeon Major Francis Day, Inspector General of Fisheries, published in 1873, shows that in the sixties of last century there was a considerable production of fish oil on the West Coast. For the years 1864-71, the high figure of 3,194,672 lbs with a value of Rs 2,03,829 is given as the export from Madras alone This was not medicinal oil, but chiefly sardine oil used for a variety of purposes But medicinal oil, obtained from the shark and saw-fish, was being produced simultaneously, apparently mainly for use in India itself For some years over 5,000 lbs per annum were manufactured, the price ranging from nine annas to Rs. 1-4-0 per lb The main centre of production was Calicut, where manufacture was initiated in 1854, the process being under the supervision of the Civil Surgeon of Malabar.

It is not clear from the report whether medicinal oil was also manufactured in Bombay and Sind. About 1870 the cost of cod liver oil fell below that of Indian fish liver oils and apparently the Indian industry languished because it could not compete with the imported product

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FEBRUARY 1941

Some Medical Problems

In spite of the British Premier Churchill's advice that the only thing that matters now, is to get on with the war till victory quite a lot of people are looking farther ahead and are busy planning this world afresh It will not be out of place or out of time for us also to consider in broad outline the plan of work and the ultimate goal of the medical profession in this country

There are three important groups that come into any scheme of medical relief, namely, the public, the Medical Profession, and the state or the Government. These three are interdependent and should work in complete co-operation and co-ordination.

The public are entitled to demand an efficient system of medical relief by the state, in the same way as they are entitled to educational facilities and protection from agression They are also entitled to ask for a reasonable amount of skill on the part of the medical man who attends on them during illness Numberless poor people are turned away from the state hospitals on the ground of want of of accommodation. More hospitals are needed for catering to the needs of the poor patients in the rural areas, and it is the duty of the state to provide them The Government often pleads want of finance in season and out of season but this is just a stereotyped plea Want of finance has not stood in the way of dispropotionatly high salaries of the handful of the medical men in Government service and other similar extravagant expenditure of the taxpayers' money.

This leads us on to the question of the medical profession and how it plays its part in rendering adequate medical relief in this country There are medical men in comfortable state employ whom the state treats as pet children and feeds and fattens, giving them all facilities that man can aspire to, encouraging them to think that they alone are the "salt of the earth." On the other side there are the "independent medical practitioners" who have to plough their own furrow without any such patronage from the state but meet with active hostility and unhealthy competition from the men in government service In the budget of the Medical department of the Government the salaries paid to the officers forms a very large percentage and the money allotted for medicines, diet, equipment, etc is very small proportionately. In an ideal state of affairs the number of officers paid out of state

funds should be limited to (1) purely and fully administrative and executive officers, (2) full time specialists as in anatomy, physiology, pathology, radiology etc. (3) Public health and preventive medicine staff including the present health services, and in addition full time medical men for each institution, school, college, factory, mill, etc, and (4) a skeleton service for certain duty posts and for emergencies. These should all be paid full time men, who certainly should not have any claim far life insurance work, medical private practice or consultant work One does not hear of high court judges being allowed consultant practice or executive engineers doing spare-time constructional engineering in their evening hours The question of special skill and aptitude, insufficiency of pay for their standard of life and the other arguments usually trotted out in support of the rights of private practice of the service men hold good in the case of judges and engineers also, but we never heard them asking for it. They also can claim that such work will not interfere with their regular official work. There is secondly the "independent medical practitioner" who is coming into his own, and who by his own independent efforts, is storming the citadels of vested interests and taking his rightful place in administering medical relief The honorary medical service is a step in this direction, modelled after the British system but several difficulties have arisen in its working in this country The Surgeon-General of this province has thought out a comprehensive scheme of honorary medical service, to which we shall refer in a later issue.

With regard to the functions of the state in the administration of medical relief, we emphatically assert that it is the duty of the state to see that an efficient and contented [illegible] is an imper[illegible] profes[illegible] ex[illegible] state not favours but fair dealing One section of the profession is petted and pampered and the other section is ignored and even discouraged. This is an undesirable and intolerable state of affairs and should be speedily terminated Legislation should be enacted to completely root out quackery as far as possible, whether supported by pseudo-nationalists, cranks, or other people State support to institutions of dubious scientific standing should be discontinued If Ayurveda, Unani, and other systems are worthy of support in the way of an Indian School of Medicine, we say give them better support by affliating them to the present medical colleges as specialist courses, say for one or two years, so that the products of these colleges will have a sound basis of scientific knowledge in these systems, rather than a doubtful smattering as at present The presen policy implies a dogged adherence to ancient methods unmindful of all the modern advance in all branches of medical science and is a negation of all progress.

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